UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/791,724	01/29/1997	RICHARD J. PRYOR	S87.506/SD59	3104

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SANDIA NATIONAL LABORATORIES
PATENT AND LICENSING CENTER
P O BOX 5800 MS 0161
ALBUQUERQUE, NM 871850161

EXAMINER
STAMBER, ERIC W

ART UNIT	PAPER NUMBER
3622	

DATE MAILED: 08/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 September 2002</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-8,10-17</u> is/are pending in the application.

    4a) Of the above claim(s) <u>18-19</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-8 and 10-17</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

1.   Prosecution reopened in view of the newly discovered reference(s) to Basu et al.

Rejections based on the newly cited reference(s) follow.

2.   Proceedings with respect to claims 1, 3, 4, 6-8, 11-15 are considered terminated.

See 37 C.F.R. 1.197(c).

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed
> publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4.   Claims 2, 5, 10, 16, 17 are rejected under 35 U.S.C. 102(a) as being anticipated

by Basu et al., "Aspen: A Microsimulation Model of the Economy" October 1996.

Basu et al teaches a method of using a multiprocessor computer to predict a

change in an economy comprising: representing the plurality of decision makers by a

plurality of agents, each agent has internal state and decision rules defining actions

responsive to input messages and the internal state (p. 1, p.3-5); assigning each

processor a subset of agents (p. 4, p. 17); initializing the internal state of each agent (p.

5, appendix A); processing each agent comprising: receiving input messages,

generating output messages and changes to the internal state based on the message,

internal state, and decision rules, and repeating the receiving and generating steps until

no more input messages destined for the agent (p.4, p. 8-10); routing output messages

(p. 4, p. 16-17); determining new values for variables from internal states and output

messages (p. 8-12); repeating until a terminal condition is reached (p. 4); outputting a

representation of the change in economy based on initial values and new values (p.14-

15). Basu et al also teaches modifying the agent's rules by generating a probability vector; causing the agent to take an action based on the vector; determining if the results were favorable or unfavorable; and adjusting the probabilities accordingly (p. 10, p. 14). Basu et al also teaches collecting output messages from the agents assigned to the processor; separating the messages into a group of messages destined for agents assigned to the processor and a group of messages destined for agents not assigned to the processor and routing the messages accordingly (p. 4, toolbox routines). Basu et al also teaches a plurality of household decision makers with an internal state of saved funds balance, and decision rules for determining whether to buy and whether to borrow (p. 5, p.8-9, p.A-2); a plurality of industry decision makers with an internal state of the number of employees and the amount of capital assets (p. A-2, firms, automakers, housing developers) and decision rules determining whether to change the number of employees, whether to borrow funds, and what price to charge for the product (p. A-4 through A-6, p. 9-10); a bank decision maker with agents that can make loans and can accept deposits and decision rules for determining an interest rate to charge on loans and an interest rate to pay on deposits (p. 11); in addition to the plurality of households and industry decision makers as above, a government decision maker (p. 11, p. A-6); the household agent has rules for determining which industry maker to purchase from (p. 8); the industry decision maker agent has decision rules for determining whether to purchase or sell capital assets (p. 11).

Basu et al teaches a method of using a multiprocessor computer comprising the steps of: representing the plurality of decision makers by a plurality of agents, each

agent has internal state and decision rules and can accept input messages and

generate output messages (p. 1, p.3-5); assigning each agent to at least one processor

(p. 4, p. 17); establishing initial values for the internal state (p. 5, appendix A);

establishing initial input messages (p.4); determining a change in the economy by

determining new values for the internal state and new output messages based on the

agent's internal state, input messages, and decision rules (p. 4, p. 8-10); communicating

output messages to corresponding agents (p. 8-10); repeating the determining and

communicating steps until a terminal condition is reached (p. 4, stages); outputting a

representation of the change in the economy (p. 14-15).

Basu et al teaches a multiprocessor computer for predicting a change in an

economy comprising: a plurality of processors each processor comprises intraprocessor

message communication facility, interprocessor communication resources with

message routing to the plurality of processors, data storage, and software storage

independently accessible (p. 4, p. 17); means for representing the plurality of decision

makers by a plurality of agents, each agent has internal state and decision rules (p. 1,

p.3-5); means for initializing the internal state of each agent and means for inputting

initial values of the variables (p. 5, appendix A); means for assigning each agent to at

least one processing unit (p. 4, p. 17); means for processing each agent comprising:

means for receiving input messages, means for updating the internal state based on the

message, internal state, and decision rules and values, means for generating an output

message and repeating the receiving, updating, generating executions until no more

input messages destined for the agent (p.4, p. 8-10); means for determining new values

for variables based on combinations (p. 8-12); means for repeating until a terminal

condition is reached (p. 4); means for outputting a representation of the change in

economy based on initial values and new values (p.14-15). Basu also teaches means

for modifying the agent's rules as the agent is processed (p. 4, p. 8-12).

5.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Yalowitz et al., patent number 6,212,649 teaches use of agents

in a distributed computing system (abstract).

Marshall, patent number 5,774,878 teaches agents comprising a rule based expert

system using financial information to simulate by virtual reality (abstract, col. 9, lines 45-

50).

Hunter, WO 97/44741 teaches a prediction method using learning agents (abstract,

summary).

Bull et al. "Monetary Implications of Tax Reforms", National Tax Journal teaches agents

representing a shopkeeper, his mother, and his daughter which use decision rules (p.

362-366).

Pryor et al., "Development of Aspen: A Microanalytic Simulation Model of the US

Economy" teaches an agent-based simulation of the economy (abstract).

        Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Melanie Kemper whose telephone number is 703-305-

9589. The examiner can normally be reached on M-F (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Eric W. Stamber can be reached on 703-305-8469. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Melanie Kemper
Primary Examiner
Art Unit 3622

MK

JOHN J. LOVE
DIRECTOR
TECHNOLOGY CENTER 3600